

OSH Requirements for Federal Agencies

- 29 CFR 1960
- EC 12196 Presidential order – compliance with OSHA standards
- Appoint Program manager
- General duty – workplace free of recognized hazard
- Provide Resources for personnel to implement program
- To assess health and safety hazards
- To abate hazards
- To provide medical surveillance

Workplace Inspections

1960.26

- Inspect without delay and at reasonable times
- Inspector may interview agency personnel and employees
- May request employees to wear monitoring equipment
- All areas inspected at least annually
- Inspections done by trained personnel
- Inspection includes management and employee bargaining unit reps
- Serious dangers must notify employees and management
- Inspection report – cite OSHA standards

Reporting Unsafe or Unhealthful Conditions

- After inspection must provide a written inspection report
- Notice of unsafe or unhealthful condition
- 15 days – safety; 30 days – health violations
- Must set abatement period
- Post notice at the workplace

Employee Complaints

1960.28

- Should not require written complaints
- Agency investigates within 24 hrs – imminent danger; 3 days for serious; 20 days for other than serious
- Employees have the right and should be encouraged to report unsafe conditions
- No employee subjected to reprisal
- Right to decline tasks that pose serious risk

Injury and Illness Records 1960.67

- Log of illness and injuries
- Maintain at each facility
- Post summary log each October
- Maintain supplemental record - CA-1, CA-2 and CA6
- Reporting of serious accidents – fatalities, inpatient hospitalization of 3 employees
- Maintain records for five years

Roles of Other Agencies

- NIOSH – HHE's , RTECS
- OSHA – may conduct announced or unannounced inspections
- GSA – provide a space that meets OSHA standards
- GSA – product safety; product recalls; MSDS

Employee Access to Records 1910.1020

- Exposure records; includes MSDS and exposure monitoring
- Medical records
- Maintain 30 years
- Employees provided access within 15 days of request
- Employee reps also provided access – medical records require employee release

OSHA Standards

- General Industry – 29 CFR 1910
- Construction – 29 CFR 1926
- Cited as part, section, paragraph, subparagraph, subparagraph
- 1910.1200(g)(2)(i)(A)
- Access on OSHA website www.OSHA.gov

Hazard Communication Program 1910.1200

- Manufacturers
 - Hazard Determination
 - Label products
 - Develop MSDS
 - Transmit information to employers
- Hazardous ingredients – 1% , 0.1 %
carcinogen, < 1% highly toxic
- Employers – rely on Manufacturers data

Inventory Chemical Products

- A list of chemical products as names appear on MSDS
- Exempt products
 - Consumer products when used as intended
 - Drugs in final form, cosmetics
 - Food, tobacco, alcoholic beverages
 - Articles – under normal conditions do not release contaminants
 - Wood when intact

MSDS

- Have MSDS for each chemical listed in the inventory for each facility
- Readily accessible to employees
- Provided with first shipment
- Provide MSDS upon request
- Also available at GSA email MSDS@GSA.gov
- Vermont SIRI; MSDSsearch.com

MSDS

- 8 Sections

- Product name, manufacturer, date, emergency contact
- Hazardous ingredients, OSHA PELs, TLVs
- Physical and chemical characteristics
- Reactivity data
- Fire hazards
- Health hazards
- Safe handling and use
- Control measures

Written Program

- Must be site specific
- Describes compliance with:
 - labeling requirements
 - MSDS file – updating, requesting
 - Training
 - Contractors
 - Personnel implementing program

Container Labels

- Identity of the hazardous chemicals
- Appropriate hazard warning
- Name and address of manufacturer
- Containers include bags, barrels, bottle, box, can, cylinder, drum, tanks, compressed gas container
- Pipes, engines, or vehicle fuel tanks not included

Emergency Action and Fire Prevention

- OSHA 1910.38 – plans in writing where more than 10 employees
- Written fire prevention plan – list of major workplace hazards, names of personnel responsible for maintenance of fire related equipment, housekeeping, training
- Written emergency action plan; elements, alarm system, evacuation, training

Fire Safety

Ignition sources

- Electrical equipment
- Friction
- Hot surfaces
- Open flames - smoking
- Combustion sparks
- Static electricity
- welding

Combustible materials

- Stored paper
- Flammable and combustible liquids
- Flammable gases - propane and acetylene
- Plastics
- Other combustibles

Egress and Emergency Response

- Pre-planning
- How to report a fire, injury or chemical spill
- Locations of emergency equipment
- Locations of fire extinguishers and spill kits
- Emergency egress map
- Location of fire alarm pull stations
- Locations of eye wash and shower

Means of Egress

- Doors open in direction of travel
- Panic hardware on main exit doors
- Never lock exit doors
- Maximum distances to an exit choice – NFPA Life Safety Code 101
- No dead ends
- Protection of egress paths - self closing fire doors, fire rated doors, fully enclosed stairways, protected hallways
- Emergency exit signs, emergency lighting

Fire Extinguishers

- Worker training
- Fire extinguisher placement – accessible, mounted, signs
- Inspection – monthly and annual maintenance

Personal Protective Equipment

- OSHA 1910.132 through 137
- Hazard Assessment – Job Hazard Analysis
- Record – identifies workplace evaluated, date, hazards necessitating PPE, selected PPE; persons certifying the evaluation
- Training records – workers trained on PPE, when needed, what needed, how to use and care for PPE

PPE

- Eye and Face protection ANSI Z87.1
- Respiratory Protection
- Foot protection – ANSI Z41
- Electrical Equipment – 1910.137
 - Test high voltage gloves every 6 months
 - Visual inspection each use

Respirator Program

- For dust masks voluntary use – no requirements
- For required respirator use
 - Written respirator program
 - Fit testing records
 - Medical surveillance records
 - Employee training records
 - Exposure evaluation
 - Respirator inspections

Bloodborne Pathogens

1910.1030

- Hepatitis B
- Hepatitis C
- HIV
- Other pathogenic organisms that are present in the blood
- Standard covers all occupational exposure to human blood or potentially infectious material (OPIM)

Program Elements

- Exposure determination
 - List job classifications with occupational exposure
 - Job tasks and procedures where potential exposure occurs
- Mostly Accident Investigators and Medical staff
- Exposure Control Plan

Written Exposure Control Plan

- Exposure determination
- Procedures for evaluation exposure incidents
- Employee training
- HBV vaccine
- Reviewed and updated annually

Other Requirements of BBP Standard

- Universal Precautions
- Engineering controls
- Personal Protective Equipment
- Housekeeping
- Regulated waste
- Annual training
- Recordkeeping

BBP Records

- Training records – maintained for three years
- Vaccine and declination forms
- Post exposure medical records

OSHA Ergonomics Standard

- 1910.900
- Basic Employee Information training
 - MSD's – signs and symptoms
 - Importance of early reporting
 - How to report symptoms
 - Risk factors
 - Summary of the OSHA standard

Risk Factors

- Excessive force
- Frequency
- Posture or awkward positioning
- Contact stress – static forces
- Vibration

FAA Risk Activities

- Lifting
- Moving equipment
- Computer workstations

Action Trigger

- When employee reports MSD symptoms
- Program requirements
 - Management leadership
 - Employee participation
 - Job hazard analysis
 - Hazard control
 - Medical management
 - Work restriction

Training

- Initial training
- Records – more than 10 employees
 - Reports of MSDS
 - JHA's, control measures
- Quick fix

Only one MSD has occurred in job
no more than 2 MSD in workplace

Office Safety

- Common electrical violations
 - Electrical equipment such as circuit panels, junction boxes, receptacles with covers or knockout plugs missing
 - Using cords that are spliced or frayed
 - Panels with unlabeled breakers
 - Portable heaters
 - Use of extension cords

Offices

- At least 50 square feet per employee
- Place heavy equipment against railings, walls or columns
- Floors should be durable, antislip
- Carpets not worn or frayed
- Aisles at least 3 feet
- File drawers should not open into aisle way

Offices

- Large glass doors or panels should have decals for conspicuousness
- Eliminate use of coffee pots, microwave ovens, or other appliances in office areas
- Materials stored – not in pathways, securely, where they don't fall on anyone
- Supervisor should inspect regularly

Four IAQ Elements

- Pollutant Source
- Pathway from source to occupants with a driving force
- Ventilation - HVAC not able to control comfort or pollutant buildup
- Occupants - sensitivity of occupants

Sources of Pollutants

- Contaminated outdoor air
 - Pollen, dust, fungal spores
 - Industrial pollutants
 - Cooling tower - L.P.
 - Vehicle exhaust - loading docks
 - Re-entry of building exhaust air
 - Odors from dumpsters
 - Aircraft engine exhaust

Moisture

- Mold and bacteria growth
- Condensation - vapor barrier, insulation
- Elevated relative humidity >60 %
- Roof or wall leaks
- Air conditioning drip pans
- Crawl spaces - ground water
- Pipe leaks

Indoor Sources

- HVAC
- Emissions from office equipment
- Supplies
- Shops, labs, cleaning processes
- Mechanical systems
- Building materials
- Combustion - boilers, gas heaters

HVAC Provides

- Thermal comfort
- Distribution of outdoor air to all areas
- Isolate and remove odors by maintaining proper pressurization
- ASHRAE standard 62-1999 – 15 to 20 cfm of outside air per person

ASHRAE standard 62

- 1973 - 5 cfm/person of outdoor air
- 1989 - 15 cfm minimum of OA per person
- Offices 7 person / 1000 ft² - 20 cfm/p OA
- Ventilation effectiveness
- 700 ppm plus CO₂ level outdoors
- Guideline - not regulation or code
- Outdoor air must meet EPA AQS

ASHRAE Standard 55

- Thermal comfort
- Acceptable to 80 % of occupants
- Winter
 - Temp 69 - 76
 - %RH 30 - 50 %
- Summer
 - Temp 73 to 79
 - %RH 40 - 60 %

Evaluating IAQ

- Building Dynamic Approach
- No regulatory standards
- Instead of measuring specific pollutants
 - Potential sources
 - Occupancy
 - Activities
 - Ventilation system

Measure Building Dynamics

- Compare to ASHRAE 62
- Carbon dioxide levels indicate ventilation effectiveness
- Ventilation flow rate
- Sanitary conditions
- Air pressure relationships
- Occupant density

Carbon Dioxide

- Normal constituent of outdoor air ranging from 350 to 400 ppm
- Human breath - 4 % (40,000 ppm)
- Severely underventilated indoors may be 2000 ppm
- CO₂ level is a function of outdoor ventilation and amount of CO₂ exhaled by occupants

Contaminant control

- Air flows toward emission source, past source through duct and out of building
- Photography dark room, labs, shops, bathrooms
- Backdraft
- Building pressurization
- Air contaminant transport

Molds

- Evidence of visible water damage
- Moisture meter
- Visible mold growth
- Mildew odor
- Other bioaersols insect, rodent, and pigeon related materials